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## BALLARD COUNTY

### (Ballard County Water Service Area Map)

- Estimated 1999 population of 8,400--over 50% on public water
- Estimated 2020 population of 9,100--57% on public water
- 40 miles of water lines, with plans for 45 additional miles
- Estimated funding needs for public water 2000-2005--\$479,000
- Estimated funding needs for public water 2006-2020--\$895,000

Ballard County had an estimated population of 8,428 (3,667 households) in 1999, with a projected population of 9,116 (4,169 households) in the year 2020. Public water is provided to 1,900 customers, or over 50 percent of the county's residents. The western portion of Ballard County is a Wildlife Management Area (WMA); this WMA stops all growth into Far Western Ballard County, thus eliminating the need for potable water in the area. Areas of the county not served by public water rely on private domestic wells. About 295 new households will be placed on public water through line extensions in 2000-2020.

#### *Estimated Costs - Proposed Projects, 2000-2005*

COUNTY/System		New Customers		Rehab	Source	Treatment	Tanks/ Pumps	Total
	Miles	Number	Cost in \$1000	in \$1000	in \$1000	in \$1000	in \$1000	in \$1000
<b>BALLARD</b>								
LACENTER WATER SYSTEM				201				201
WICKLIFFE WATER SYSTEM	5.2	20	136					136
KEVIL WATER SYSTEM	5.5	40	142					142
<b>TOTAL</b>	<b>10.7</b>	<b>60</b>	<b>278</b>	<b>201</b>				<b>479</b>

#### *Estimated Costs - Proposed Projects, 2006-2020*

COUNTY/System		New Customers		Rehab	Source	Treatment	Tanks/ Pumps	Total
	Miles	Number	Cost in \$1000	in \$1000	in \$1000	in \$1000	in \$1000	in \$1000
<b>BALLARD</b>								
BARLOW WATER & SEWER	11.3	30	293					293
LACENTER WATER SYSTEM	4.3	53	111					111
KEVIL WATER SYSTEM	8.9	80	232					232
LACENTER WATER SYSTEM	5.7	45	149					149
WICKLIFFE WATER SYSTEM	4.3	25	111					111
<b>TOTAL</b>	<b>34.4</b>	<b>233</b>	<b>895</b>					<b>895</b>

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# WATER SERVICE AREAS

## BALLARD COUNTY

### Kentucky

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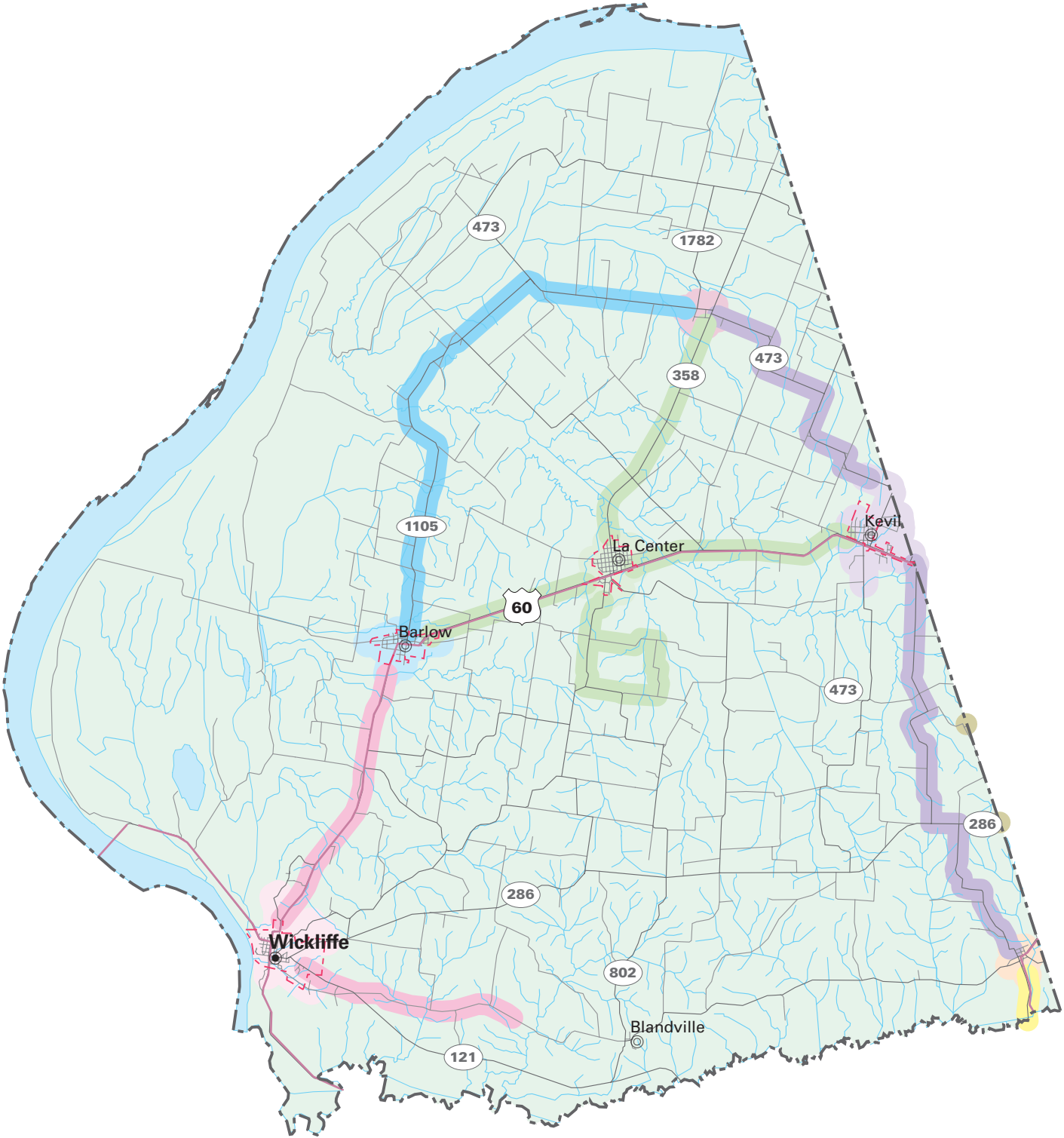
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#### WATER SERVICE STATUS BY OWNER

EXISTING SERVICE AREA	PROPOSED SERVICE AREA	
		WICKLIFFE MUNICIPAL WATER SYSTEM
		WEST MCCRACKEN COUNTY WATER DISTRICT
		LOVELACEVILLE WATER COMPANY
		LACENTER MUNICIPAL WATER COMPANY
		KEVIL WATER DEPARTMENT
		CUNNINGHAM WATER DISTRICT
		BARLOW WATER SYSTEM
		BANDANA WATER DISTRICT

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## PUBLIC WATER SYSTEMS

Ballard County is served by 7 community water systems--4 municipal, 2 private, 1 water district--and 4 non-community water systems.

### **BANDANA WATER DISTRICT**

PWSID: ..... 0040015  
System Type:..... COMMUNITY  
Owner Type: ..... WATER DISTRICT  
Surface Source:  
Purchase Source:  
Well Source: ..... Yes  
Sells Water to:  
Treatment Plant Capacity (MGD):..... 0.03  
Percent Daily Average Production: ..... 56.00  
Total Tank Storage Capacity (gallons):..... 1,000.00  
Total Service Connections: ..... 97.00  
Number of Employees:..... 0.00  
Treatment Operator Class:  
Distribution Operator Class: ..... 2BD  
Customer Rate for 1,000 Gallons:..... 3.51  
O/M costs 1997:..... 11,909.62  
O/M costs per Service Connection: ..... 11,909.62  
Net Revenue 1997: ..... 1,006.03  
Total Water Produced 1997 (gallons):..... 4,568,592.00  
Water Sold 1997 (gallons):..... 4,568,592.00  
Unaccounted-for Water 1997 (%): ..... 0.00

The Bandana Water District has 97 customers and has no fulltime employees. The water system withdraws about 5,000 gallons per day from two wells. The water treatment plant can treat 30,000 gallons per day and processes about 17,000 gallons per day (56% of its capacity).

### **BARLOW WATER SYSTEM**

PWSID: ..... 0040020  
System Type:..... COMMUNITY  
Owner Type: ..... MUNICIPAL  
Surface Source:  
Purchase Source:  
Well Source: ..... Yes  
Sells Water to:  
Treatment Plant Capacity (MGD):..... 0.43  
Percent Daily Average Production: ..... 18.00  
Total Tank Storage Capacity (gallons):..... 100,000.00  
Total Service Connections: ..... 360.00  
Number of Employees:..... 2.00  
Treatment Operator Class:  
Distribution Operator Class: ..... 2BD  
Customer Rate for 1,000 Gallons:..... Not available  
O/M costs 1997:..... Not available

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O/M costs per Service Connection: .....	Not available
Net Revenue 1997: .....	Not available
Total Water Produced 1997 (gallons): .....	Not available
Water Sold 1997 (gallons): .....	Not available
Unaccounted-for Water 1997 (%): .....	Not available

Barlow Water and Sewer, a municipal water system, serves 360 customers and has two employees. It obtains the water from a ground source from two wells. The system has a permitted withdrawal of 85,000 gallons per day, but they draw on the average of only 70,000 gallons per day. Barlow Water & Sewer has a storage capacity of 113,000 gallons. The plant requires an operator to be certified to operate at least a class IIBD. The plant operator is also the distribution operator. The system spends 58% of its revenues on operation and maintenance.

#### **KEVIL WATER DEPARTMENT**

PWSID: .....	0040223
System Type: .....	COMMUNITY
Owner Type: .....	MUNICIPAL
Surface Source:	
Purchase Source:	
Well Source: .....	Yes
Sells Water to:	
Treatment Plant Capacity (MGD): .....	0.07
Percent Daily Average Production: .....	23.00
Total Tank Storage Capacity (gallons): .....	50,000.00
Total Service Connections: .....	418.00
Number of Employees: .....	2.00
Treatment Operator Class:	
Distribution Operator Class: .....	2BD
Customer Rate for 1,000 Gallons: .....	Not available
O/M costs 1997: .....	Not available
O/M costs per Service Connection: .....	Not available
Net Revenue 1997: .....	Not available
Total Water Produced 1997 (gallons): .....	Not available
Water Sold 1997 (gallons): .....	Not available
Unaccounted-for Water 1997 (%): .....	Not available

The Kevil municipal water system serves 390 customers and employs 2 fulltime employees. The system withdraws water from two wells. The permitted withdrawal is 125,000 gallons per day and they withdraw an average 88,000 gallons per day. The treatment plant has a 24-hour rated capacity of 72,000 gallons per day. The plant requires an operator be licensed at class II.

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### **LACENTER MUNICIPAL WATER COMPANY**

PWSID: ..... 0040228  
System Type: ..... COMMUNITY  
Owner Type: ..... MUNICIPAL  
Surface Source:  
Purchase Source:  
Well Source: ..... Yes  
Sells Water to:  
Treatment Plant Capacity (MGD): ..... 0.08  
Percent Daily Average Production: ..... 35.00  
Total Tank Storage Capacity (gallons): ..... 75,000.00  
Total Service Connections: ..... 480.00  
Number of Employees: ..... 6.00  
Treatment Operator Class:  
Distribution Operator Class: ..... 2BD  
Customer Rate for 1,000 Gallons: ..... Not available  
O/M costs 1997: ..... Not available  
O/M costs per Service Connection: ..... Not available  
Net Revenue 1997: ..... Not available  
Total Water Produced 1997 (gallons): ..... Not available  
Water Sold 1997 (gallons): ..... Not available  
Unaccounted-for Water 1997 (%): ..... Not available

LaCenter Water Department is a municipal water system that employs 4 full time and 2 part time individuals and serves 480 customers. The system has a permitted withdrawal of 187,000 gallons per day. Average withdrawal is 165,000 gallons per day. System treatment capacity is 300,000 gallons per day. The system has storage capacity of 75,000 gallons. The water department spends about 73% of its revenue on operation and maintenance. The plant requires a class IIBD licensed operator.

### **LOVELACEVILLE WATER COMPANY**

PWSID: ..... 0040259  
System Type: ..... COMMUNITY  
Owner Type: ..... MUNICIPAL  
Surface Source:  
Purchase Source:  
Well Source: ..... Yes  
Sells Water to:  
Treatment Plant Capacity (MGD): ..... 0.01  
Percent Daily Average Production: ..... 4.00  
Total Tank Storage Capacity (gallons): ..... 1,000.00  
Total Service Connections: ..... 62.00  
Number of Employees: ..... 0.00  
Treatment Operator Class:  
Distribution Operator Class: ..... 2BD  
Customer Rate for 1,000 Gallons: ..... 11,673.00  
O/M costs 1997: ..... 11,673.00  
O/M costs per Service Connection: ..... 194.55

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Net Revenue 1997: .....	3,635.00
Total Water Produced 1997 (gallons):.....	2,668,496.00
Water Sold 1997 (gallons):.....	2,597,866.00
Unaccounted-for Water 1997 (%): .....	2.65

The Lovelaceville water company serves 62 customers and employs 1 fulltime employee. The system is individually owned. The system obtains its water from a well that has a permitted withdrawal of 9,999 gallons per day, and on the average the system withdraws 6,500 per day. The system has one tank that hold 1,000 gallons of water. At present the plant spends 110% of revenue on operation and maintenance.

#### **WICKLIFFE MUNICIPAL WATER SYSTEM**

PWSID: .....	0040469
System Type:.....	COMMUNITY
Owner Type: .....	MUNICIPAL
Surface Source:	
Purchase Source:	
Well Source: .....	Yes
Sells Water to:	
Treatment Plant Capacity (MGD):.....	0.50
Percent Daily Average Production: .....	34.00
Total Tank Storage Capacity (gallons):.....	200,000.00
Total Service Connections: .....	526.00
Number of Employees:.....	4.00
Treatment Operator Class:.....	2D
Distribution Operator Class: .....	3B
Customer Rate for 1,000 Gallons:.....	Not available
O/M costs 1997:.....	Not available
O/M costs per Service Connection: .....	Not available
Net Revenue 1997: .....	Not available
Total Water Produced 1997 (gallons):.....	Not available
Water Sold 1997 (gallons):.....	Not available
Unaccounted-for Water 1997 (%): .....	Not available

The City of Wickliffe water system serves 526 customers and employs 4 fulltime employees. The system on the average withdraws 110,000 gallons per day from two wells. The treatment plant has a 24-hour rated capacity of 500,000 gallons. The plant processes 225,000 gallons per day, operating at 45%. The city has a storage capacity of 354,000 gallons. The city spends 74% of the systems revenues on operation and maintenance. The system requires a class IIIB licensed operator.

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## OTHER SYSTEMS

### **ALDERSON TRAILER COURTS**

Alderson Trailer Courts is located in Ballard County. The system serves a population of 20 and has 7 service connections. The private, community system water source is ground water from wells.

### **ROBERT NEWTON TRAILER PARK**

Robert Newton Trailer Park is located in Ballard County. The system serves a population of 20 and has 8 service connections. The private, transient, non-community system has treatment capacity of 10,000 gallons per day. The water source is ground water from wells.

### **WESTVACO TIMBERLANDS**

Westvaco Timberlands is located in Ballard County. The system serves a population of 24 and has 1 service connection. The private, transient, non-community system water source is ground water from wells.

### **BALLARD WILDLIFE AREA**

Ballard Wildlife Area is located in Ballard County. The system serves a population of 21 and has 1 service connection. The private, transient, non-community system has treatment capacity of 850,000 gallons per day. The water source is ground water from wells.

### **TRAILS END RANCH**

Trails End Ranch is located in Ballard County. The system serves a population of 90 and has 1 service connection. The private, transient, non-community system water source is ground water from wells.

## PRIVATE DOMESTIC SYSTEMS

About 4,100 people in Ballard County rely on private domestic wells for their source of water.

Abundant quantities of ground water is available for domestic, irrigation, and industrial uses in Ballard County from depths of a few feet down to 600 feet. In general, the chemical quality of the water is good, but water from some aquifers contains objectionable amounts of

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iron and manganese. Water from alluvium is generally hard to very hard. Generally, depths to ground-water is under 100 feet except in the uplands of southern Ballard County where sufficient ground water is obtained at depths greater than 100 feet.

Water quality generally is good except in areas where downward percolation of surface water and fluids from domestic sewage-disposal systems, and other sources of domestic or industrial pollution have contaminated the aquifer. Ground water sometimes contains iron naturally in objectionable amounts from the deeper zones. In some formations with slightly acidic ground-water, a chemical reaction between the acidic ground-water and steel well casing and pump equipment will produce a high iron content in the water which is not naturally occurring.

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